

1       [0098]                               **ABSTRACT OF THE DISCLOSURE**

2       [0099]       We have developed a method of PECVD depositing a-SiN<sub>x</sub>:H films which are  
3       useful in a TFT device as gate dielectric and passivation layers, when a series of TFT  
4       devices are arrayed over a substrate having a surface area larger than about 1 m<sup>2</sup>, which  
5       may be in the range of about 4.1 m<sup>2</sup>, and even as large as 9 m<sup>2</sup>. The a-SiN<sub>x</sub>:H films  
6       provide a uniformity of film thickness and uniformity of film properties, including  
7       chemical composition, which are necessary over such large substrate surface areas. The  
8       films produced by the method are useful for both liquid crystal active matrix displays and  
9       for organic light emitting diode control.